

REMARKS

The amendment to claims 1 and 8 are supported by the original disclosure at page 7, lines 4-6, page 9, lines 21-25 of the specification, Figure 3(d). Applicant submits that the term "substantially" is intended to cover any minor deviations in the pattern transfer process fidelity which can be implied from the discussion of pattern transfer on page 9, lines 21-25 of the specification. Applicant submits that the amendment does not add any new matter to the disclosure.

The invention centers on an improved configuration of metal features for an FET-based MRAM. Specifically, the configuration of the invention can be more reliably manufactured due to the use of a metal shield and conductive strap which are self-aligned with respect to each other. The amendment further clarifies that the metal shield and conductive strap are substantially coextensive. The invention advantageously minimizes the occurrence of shorting between the M2 line and the strap connecting the FET caused by micro-trenching while enabling a reduction in the metal shield thickness for improved performance.

Tsang (US Pat. 6909630) discloses a conventional MRAM-FET configuration where the capping layer (3104) is not self-aligned with and having substantially the same shape as the conductive layer (79). Note Figure 7 of Tsang. Tsang appears to be silent on the concept of self-alignment, much less the idea that capping layer 3104 be self-aligned with conductive layer 79. Tsang at col. 9, lines 20-50 and Figure 7 do not disclose or suggest the patterning of capping layer 3104 and conductive layer 79 to result in regions 3104 and 79 being substantially coextensive. Thus, applicant submits that Tsang does not disclose or suggest a conductive line structure for FET-based magnetic random access memory (MRAM) device where the metal capping layer is substantially

coextensive with the conductive strap for connection with the FET. Tsang also does not disclose or suggest a method for forming such a structure.

Kim et al. (US Pat. 6806096) discloses an MRAM cell of similar configuration as Tsang in that the conductive strap is not substantially coextensive with the metal shield which contacts the bitline. Thus, the combination of Tsang and Kim et al., fails to disclose or suggest a conductive line structure for FET-based magnetic random access memory (MRAM) device where the metal capping layer is substantially coextensive with the conductive strap for connection with the FET, nor a method for forming such a structure.

For the above reasons, applicants submit that all the pending claims are now patentable over the prior art of record and that the application is in condition for allowance. Such allowance is earnestly and respectfully solicited.

Respectfully submitted,
Michael C. Gaidis

By /Steven Capella/
Steven Capella, Attorney
Reg. No. 33,086
Telephone: 845-894-3669